

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000789**Date Inspected:** 01-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhu Zhanghai & Xu Le Feng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG & Mock Up**Summary of Items Observed:**

Orthotropic Box Girder (OBG):

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the OBG.

OBG T-RIBS:

The QA Inspector randomly observed ZPMC Quality Control (QC) Personnel utilizing mag drills to drill bolt holes in the flanges on T-Ribs to be used in the fabrication of the Orthotropic Box Girders. The following photograph provides additional detail.

Elevation 77M:

The QA Inspector randomly observed ZPMC welder Wang Bing ID Number 048696, utilizing the Flux Cored Arc Welding (FCAW) Process with approved ZPMC Weld Procedure Specification (WPS) WPS-B-T-2233-B-U3-F, to weld fill passes in the 3G position on the outside of Weld Joint (WJ) MUSA-MA273-4, between MUSA-MA273 flange plates piece marks p585 and p615, for 77M Diaphragm MUSA-SA104. The flange was being welded in a separate welding area and not installed in the diaphragm. The QA Inspector observed ZPMC CWI Zhu Zhanghai monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 210 amps, welding voltage 26 volts with a travel speed of 118 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS. The

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

following photograph provides additional detail.

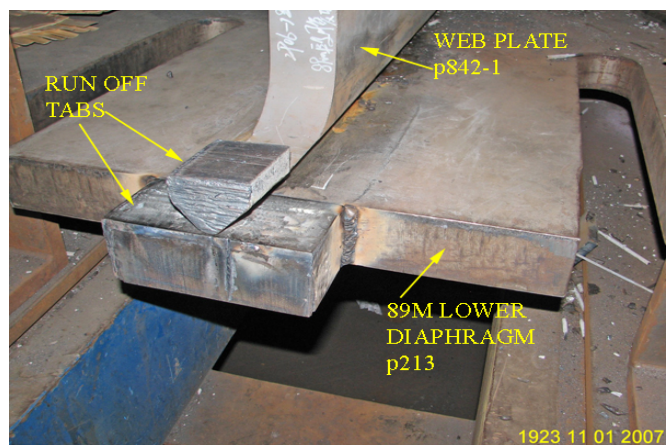
The QA Inspector randomly observed ZPMC welding personnel removing reinforcing flange MUSA-SA274 of 77M Diaphragm MUSA-SA95, from the welding area to placement in the diaphragm to verify the weld gap between the flange and the diaphragm. The following photograph provides additional detail.

Elevation 89M:

The QA Inspector randomly observed ZPMC welding personnel performing a heat straightening operation on 89M Skin Plate C Sub-Assembly MUSB-MA23. The QA Inspector randomly observed the heat being applied to an area directly adjacent to WJ 25/26 on the 25 side. The following photograph provides additional detail.

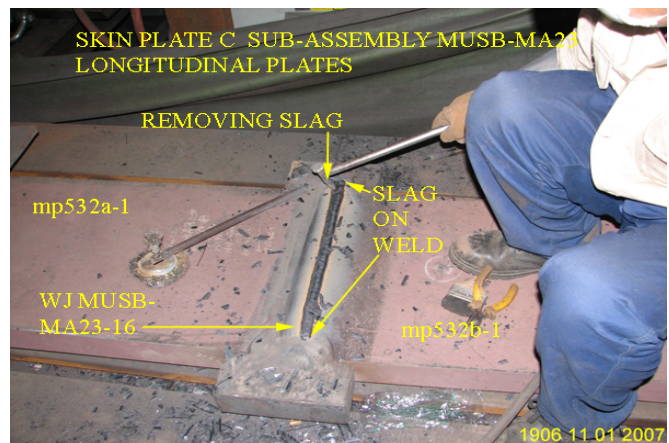
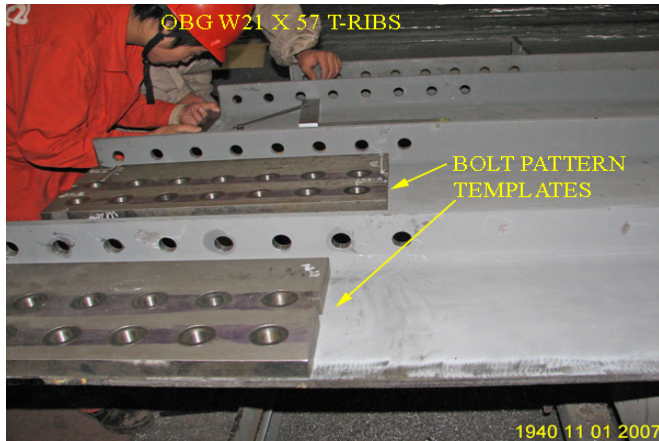
The QA Inspector randomly observed ZPMC welder Lei Li Chao ID Number 053619, utilizing the FCAW process with approved ZPMC WPS WPS-B-T-2231-B-U3-F, to weld the cover pass in the 1G position on WJ MUSA-MA23-16, between longitudinal plates mp532a-1 and mp532b-1 for 89M Skin Plate C, Sub-Assembly MUSB-MA23. The QA Inspector observed ZPMC CWI Xu Le Feng monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 312 amps, welding voltage 31.6 volts with a travel speed of 380 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS. The following photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Li Zhao Qian ID Number 048810, utilizing the FCAW process with approved ZPMC WPS WPS-B-T-2231-B-U3-F, to weld the fill passes in the 1G position on WJ MUSA-MA23-12, between longitudinal plates mp533a-1 and mp533b-1 for 89M Skin Plate C, Sub-Assembly MUSB-MA23. The QA Inspector observed ZPMC CWI Xu Le Feng monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 320 amps, welding voltage 31.8 volts with a travel speed of 332 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

There were no relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer